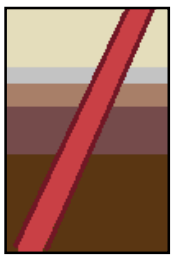
Glossary

Cross-bedding-Cross bedding occurs as water or wind flows over loose sediment such as clay or sand, shaping it into tiny ripples or large dunes as the sediment migrates along the shore. These are usually distinguishable by a series of parallel inclined slopes which can build up and overlap previous ripples.



Dikes- A dike is a tabular or sheet-like igneous feature which pushes vertically upward through weak/thin layers of earth's crust or along fault planes or fractures.

Erosion- The process by which loose sediment is transported away from the source material by wind or flowing water.

Fossils- The physical remains of a once living organism, or indications of an organism's existence, which has been preserved within sedimentary rocks. Body fossils refer to skeletal matter which has lasted the test of time while trace fossils refer to footprints, fossilized poop, or nests that have been preserved.

Hornfels- Hornfels is a type of metamorphic rock created when clay rich sedimentary rocks such as shale and mudstones are exposed to high temperatures.

Igneous- Igneous rocks are those which have a magmatic origin and have cooled within the earth as intrusive igneous rocks or as lava and ash as extrusive igneous rocks. Common igneous rocks include granite, diorite, gabbro, diabase, rhyolite, andesite, and basalt.

Lacustrine-A lacustrine environment is a type of depositional setting associated with lakes. These settings are characterized by very fine-grained sediment, planar or cross bedding, and freshwater fossils.

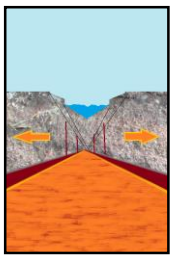
While the park was once submerged by a large lake there are currently no lakes in the park.

Lithification- Lithification is the process by which loose sediment becomes a rock. In order to begin the process of lithification, high pressures must be applied, usually through burial, removing empty pore spaces between sediment grains.

Metamorphic-Metamorphic rocks are igneous, sedimentary, or other metamorphic rocks which have undergone extreme heat and pressure conditions causing a chemical or mineralogical changes without melting the rock. Regional metamorphism occurs on a large scale when entire crustal regions are subducted and exposed to high pressures and temperatures. Contact metamorphism occurs on a small scale and is usually caused by an igneous intrusion. Common metamorphic rocks include gneiss, slate, schist, marble, and quartzite.

Micaceous- Mica is a soft, sheet like mineral usually found as in metamorphosed rocks. Mica can also be found as very fine-grained clasts within sedimentary rocks. Medium to large crystals of muscovite can be used as an indicator of thermal metamorphism.

Mudcracks- Mudcracks form as sediment and clay minerals begin to dehydrate and shrink, forming cracks in the surface. These usually form along river banks and are a useful indicator of which side of a hand sample is up/down



Rifting- A rifting event occurs along divergent boundaries as continental crust undergoes tension causing the crust to thin and break. The resultant cracks in the crust act as normal faults causing the overlaying rocks to sink down to lower elevations. Rift valleys tend to later be filled by lakes.

Root casts- Root casts are a sedimentary feature indicating the presence of plant material. Like mudcracks, root casks can be used as a facing indicator to determine which side of a hand sample is up/down. These casts tend to be long, thin, cylindrical tubes branching out from a central point (the stem). These casts are sometimes calcified or sometimes simply filled in with a different type of material.

Sedimentary- Sedimentary rocks are lithified accumulations of loose sediment and lithic clasts derived from parent rocks through the process of erosion. Common sedimentary rocks include sandstone, shale, conglomerates, and breccia.

Shale- Shale is a type of sedimentary rock with a composition of quartz, clays, and sometimes calcite making these rocks very fine-grained. Shales are formed in low energy environments such as lake or deep marine settings.

Siltstone-Siltstone is a sedimentary rock with a variable grain size between that of clay and sand and a composition predominately of silica.

Weathering- Weathering is the process by which rocks, soils, and minerals break down through physical or chemical means.